



PCT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/501,196

DATE: 07/16/2004

TIME: 16:55:45

Input Set : A:\NEB-198-PJP.txt

Output Set: N:\CRF4\07162004\J501196.raw

3 <110> APPLICANT: NEW ENGLAND BIOLABS, INC.  
 4 SAMUELSON, JAMES  
 5 XU, SHUANG-YONG  
 7 <120> TITLE OF INVENTION: ALTERATION OF RESTRICTION ENDONUCLEASE SPECIFICITY BY  
 GENETIC SELECTION  
 9 <130> FILE REFERENCE: NEB-198-PCT  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/501,196  
 C--> 12 <141> CURRENT FILING DATE: 2004-07-09  
 14 <150> PRIOR APPLICATION NUMBER: US 60/347,403  
 15 <151> PRIOR FILING DATE: 2002-01-10  
 17 <160> NUMBER OF SEQ ID NOS: 2  
 19 <170> SOFTWARE: PatentIn version 3.1  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 612  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Bacillus stearothermophilus Y406  
 26 <220> FEATURE:  
 27 <221> NAME/KEY: CDS  
 28 <222> LOCATION: (1)..(612)  
 29 <223> OTHER INFORMATION:

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 35 1 5 10 15  
 37 caa gtt cac ttg cca cat att tgg gaa gaa att caa gaa att att gtt 96  
 38 Gln Val His Leu Pro His Ile Trp Glu Glu Ile Gln Glu Ile Ile Val  
 39 20 25 30  
 41 tct att gac gca gaa gct tgt aga acg aag gaa tca aaa gaa aag aca 144  
 42 Ser Ile Asp Ala Glu Ala Cys Arg Thr Lys Glu Ser Lys Glu Lys Thr  
 43 35 40 45  
 45 aaa caa gga caa ata ctt tat agt ccc gta gct tta aat gaa gca ttc 192  
 46 Lys Gln Gly Gln Ile Leu Tyr Ser Pro Val Ala Leu Asn Glu Ala Phe  
 47 50 55 60  
 49 aag gaa aaa tta gaa gca aaa ggt tgg aaa gaa agt cga aca aac tat 240  
 50 Lys Glu Lys Leu Glu Ala Lys Gly Trp Lys Glu Ser Arg Thr Asn Tyr  
 51 65 70 75 80  
 53 tat gtg act gct gac cca aag ctg att cgt gaa aca tta tca ctt gaa 288  
 54 Tyr Val Thr Ala Asp Pro Lys Leu Ile Arg Glu Thr Leu Ser Leu Glu  
 55 85 90 95  
 57 cca gag gaa caa aag aaa gtg att gaa gcc gca gga aaa gaa gca tta 336  
 58 Pro Glu Glu Gln Lys Lys Val Ile Glu Ala Ala Gly Lys Glu Ala Leu  
 59 100 105 110  
 61 aag tct tat aat caa acg gat ttt gta aaa gat aga gtg gca ata gaa 384  
 62 Lys Ser Tyr Asn Gln Thr Asp Phe Val Lys Asp Arg Val Ala Ile Glu

ENTERED

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65 gtt caa ttc gga aaa tat tct ttt gtc gct tat gac ctt ttc gtc aaa      432
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67          130          135          140
69 cac atg gct ttc tat gtt agt gat aaa att gac gtt ggt gtc gaa ata      480
70 His Met Ala Phe Tyr Val Ser Asp Lys Ile Asp Val Gly Val Glu Ile
71 145          150          155          160
73 ttg cca atg aag gaa tta tca aaa gaa atg tct tcg gga atc agt tat      528
74 Leu Pro Met Lys Glu Leu Ser Lys Glu Met Ser Ser Gly Ile Ser Tyr
75          165          170          175
77 tac gaa ggt gaa tta tac aat gtg ata cgg caa ggt cgt ggc gtt cct      576
78 Tyr Glu Gly Glu Leu Tyr Asn Val Ile Arg Gln Gly Arg Gly Val Pro
79          180          185          190
81 gcc gtt ccg ttg gtt tta atc ggg att gcc cct taa      612
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87 <211> LENGTH: 203
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89 <213> ORGANISM: Bacillus stearothermophilus Y406
91 <400> SEQUENCE: 2
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98          20          25          30
101 Ser Ile Asp Ala Glu Ala Cys Arg Thr Lys Glu Ser Lys Glu Lys Thr
102          35          40          45
105 Lys Gln Gly Gln Ile Leu Tyr Ser Pro Val Ala Leu Asn Glu Ala Phe
106          50          55          60
109 Lys Glu Lys Leu Glu Ala Lys Gly Trp Lys Glu Ser Arg Thr Asn Tyr
110 65          70          75          80
113 Tyr Val Thr Ala Asp Pro Lys Leu Ile Arg Glu Thr Leu Ser Leu Glu
114          85          90          95
117 Pro Glu Glu Gln Lys Lys Val Ile Glu Ala Ala Gly Lys Glu Ala Leu
118          100          105          110
121 Lys Ser Tyr Asn Gln Thr Asp Phe Val Lys Asp Arg Val Ala Ile Glu
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125 Val Gln Phe Gly Lys Tyr Ser Phe Val Ala Tyr Asp Leu Phe Val Lys
126          130          135          140
129 His Met Ala Phe Tyr Val Ser Asp Lys Ile Asp Val Gly Val Glu Ile
130 145          150          155          160
133 Leu Pro Met Lys Glu Leu Ser Lys Glu Met Ser Ser Gly Ile Ser Tyr
134          165          170          175
137 Tyr Glu Gly Glu Leu Tyr Asn Val Ile Arg Gln Gly Arg Gly Val Pro
138          180          185          190
141 Ala Val Pro Leu Val Leu Ile Gly Ile Ala Pro
142          195          200

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**VERIFICATION SUMMARY**

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Input Set : A:\NEB-198-PJP.txt

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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:32 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:29